

Activity Lab 1-8b

Multiplying and Dividing Decimals by 10, 100 and 1,000

There are SHORTCUTS for multiplying and dividing decimals by 10, 100 and 1,000. You can use these shortcuts to multiply mentally.

1. Use a calculator to multiply

$$2.6 \times 10 = \underline{\hspace{2cm}}$$

$$0.45 \times 10 = \underline{\hspace{2cm}}$$

Patterns- What did you notice about the movement of the decimal point when you multiply by 10?

$$2.6 \times 100 = \underline{\hspace{2cm}}$$

$$0.45 \times 100 = \underline{\hspace{2cm}}$$

Patterns- What did you notice about the movement of the decimal point when you multiply by 100?

$$2.6 \times 1,000 = \underline{\hspace{2cm}}$$

$$0.45 \times 1,000 = \underline{\hspace{2cm}}$$

Patterns- What did you notice about the movement of the decimal point when you multiply by 1,000?

Rules-

When you multiply by 10 you move the decimal point _____ place to the _____.

When you multiply by 100 you move the decimal point _____ places to the _____.

When you multiply by 1,000 you move the decimal point _____ places to the _____.

Predict what will happen if you multiply a decimal number by 10,000.

2. Use a calculator to divide

$2.6 \div 10 = \underline{\hspace{2cm}}$

$0.45 \div 10 = \underline{\hspace{2cm}}$

Patterns- What did you notice about the movement of the decimal point when you divide by 10?

$2.6 \div 100 = \underline{\hspace{2cm}}$

$0.45 \div 100 = \underline{\hspace{2cm}}$

Patterns- What did you notice about the movement of the decimal point when you divide by 10?

$2.6 \div 1,000 = \underline{\hspace{2cm}}$

$0.45 \div 1,000 = \underline{\hspace{2cm}}$

Patterns- What did you notice about the movement of the decimal point when you divide by 10?

Rules-

When you divide by 10 you move the decimal point _____ place to the _____.

When you divide by 100 you move the decimal point _____ places to the _____.

When you divide by 1,000 you move the decimal point _____ places to the _____.

Predict what will happen if you divide a decimal number by 10,000

Exercises- Use mental math to find each answer.

1. $6.2 \times 10 = \underline{\hspace{2cm}}$ 2. $122.9 \div 10 = \underline{\hspace{2cm}}$ 3. $161.7 \div 100 = \underline{\hspace{2cm}}$

4. $1,000(43) = \underline{\hspace{2cm}}$ 5. $1.5 \div 100 = \underline{\hspace{2cm}}$ 6. $1,000 \cdot 0.89 = \underline{\hspace{2cm}}$

